1. Apparatus for blocking an unauthorized access to limited access data stored in a fibre channel configuration network system including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and internal data storage systems, at least one internal data storage system containing the limited access data stored therein, said blocking apparatus intercepting data access to the internal data storage system containing the limited access data, said blocking apparatus comprising:

a receiving section means for receiving a serialized request for data from a requesting source on a fibre channel from the fabric switch and for transforming the serial data to parallel frames of data;

a FIFO section for sequentially receiving sets of parallel frames of data from said receiving section and for transmitting the parallel sets of data to the target after reserialization;

a control section including means for individually sensing each set of parallel frames of data from said FIFO section, means for sensing a start of data frame from one set of the parallel frames of data, means for comparing individual sets of parallel frames of data from said FIFO section after sensing the start of frame data to compare another set of frame data from said FIFO section to allowed addresses stored in said control section, and means for generating IDLE characters representing no data, said control section permitting the transmission of parallel sets of data frames to the target data store if said comparing means senses a match between the allowed addresses and the set of parallel frame of data in said FIFO section and activating the

generating means to transmit IDLE characters if no match is sensed; and

a transmitting section under control of said control section to encode and serialize the parallel sets of data received from the FIFO, or to transmit the IDLE characters if no match is sensed.

2. Blocking apparatus positioned between a target data storage and a hub in a fibre channel arbitrated loop system for stopping the unauthorized transmittal of data from the target data storage to a requesting source, said blocking apparatus comprising:

a receiving section means for receiving a serialized request for data from the requesting source on a fibre channel and for transforming the serial data to parallel frames of data;

a FIFO section for sequentially receiving sets of parallel frames of data from said receiving section and for transmitting the parallel sets of data to the target data store;

a control section including means for individually sensing each set of parallel frames of data from said FIFO section, means for sensing a start of data frame from one set of the parallel frames of data, means for comparing individual sets of parallel frames of data from said FIFO section after sensing the start of frame data to compare another set of frame data from said FIFO section to allowed addresses stored in said control section, and means for generating IDLE characters representing no data, said control section permitting the transmission of sets of data frames after serialization to the target if said comparing means senses a match between the allowed addresses and the set of parallel frame of data in said FIFO section and activating the generating means to transmit IDLE characters if no match is sensed; and

a transmitting section under control of said control section to encode and serialize the parallel sets of data received from the FIFO section if said comparing means senses a match or to transmit the IDLE characters if no match is sensed.

3. Blocking apparatus positioned between a fabric switch system and a hub in a fibre channel arbitrated loop system for stopping the unauthorized transmittal of data from the hub to a requesting source in the fabric switch system, said blocking apparatus comprising:

a receiving section means for receiving a serialized request for data from the requesting source on a fibre channel from the fabric switch and for transforming the serial data to parallel frames of data;

a FIFO section for sequentially receiving sets of parallel frames of data from said receiving section and for transmitting the parallel sets of data to the target after serialization;

a control section including means for individually sensing each set of parallel frames of data from said FIFO section, means for sensing a start of data frame from one set of the parallel frames of data, means for comparing individual sets of parallel frames of data from said FIFO section after sensing the start of frame data to compare another set of frame data from said FIFO section to allowed addresses stored in said control section, and means for generating IDLE characters representing no data, said control section permitting the transmission of sets of data frames after serialization to the target if said comparing means senses a match between the allowed addresses and the set of parallel frame of data in said FIFO section and activating the generating means to transmit IDLE characters if no match is sensed; and

a transmitting section under control of said control section to encode and serialize the parallel sets of data received from the FIFO section if said comparing means senses a match or to transmit the IDLE characters if no match is sensed.

4. Blocking apparatus positioned between a target data storage and a hub in a fibre channel arbitrated loop system for stopping the unauthorized transmittal of data from the target data storage to a requesting source, said blocking apparatus comprising:

a serial-to-parallel receiving means connected to a fibre channel for receiving a serialized request for data from the requesting source on the fibre channel and for transforming the serial data to groups of parallel data;

an encoding means for packaging groups of parallel data from said receiving means into a series of set of parallel frames of data;

a FIFO section for sequentially receiving and storing sets of parallel frames of data from said encoding means;

a control section including an allowed addresses store, an allowed address comparing means, means for individually sensing each set of parallel frames of data from said FIFO section, means for sensing a start of data frame from one set of the parallel frames of data, and means for generating IDLE characters representing no data,

said allowed address comparing means comparing individual sets of parallel frames of data from said FIFO section after sensing the start of frame data to compare a source address set of frame data from said FIFO section to an address stored in said allowed addresses store;

said control section permitting the transmission of parallel sets of data frames from said FIFO section to the target after serialization if said allowed address comparing means senses a

match between the allowed addresses and the set of parallel frame of data in said FIFO section and activating the generating means to transmit IDLE characters if no match is sensed;

an encoder connected to receive either the data frames from the FIFO section or the IDLE characters from the IDLE character generator and to convert the data frames to smaller groups of parallel words; and

a parallel to serial converter connected to said encoder to change the parallel words from said decoder to serial data for transmission on the fibre channel to the target.

5. Blocking apparatus as described in **Claim 4** wherein said control section further includes means for storing a target address and a target address comparing means, said target address comparing means comparing the target address from said target address store of a destination identification set of parallel frame of data from said FIFO section, said target address comparing means activating said allowed address comparing means if a match is made in the target address comparing means to compare the allowed address from the allowed addresses store of the source address set of parallel frame data from the FIFO section, said control section permitting the transfer of data frames from the FIFO section to the target if the target address comparing means does not match the target address to the source address set of frame data from the FIFO section.

6. A method for blocking an unauthorized access to limited access data stored in a fibre channel configuration network system including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and internal data storage systems, at least one internal data storage

system containing the limited access data stored therein, said method intercepting data access to the internal data storage system containing the limited access data, said method comprising the steps of:

accepting serial data from a fibre channel connected to a hub;

converting the serial data to parallel data;

encoding the parallel to frames of data;

sequentially entering the parallel frames of data into word of data in a FIFO store;

detecting a start of word data in the FIFO store;

sensing an upper level device path word from the FIFO store;

comparing the destination identifying address to a target address;

comparing a source address word from the FIFO store if the destination identifying address matches the target address, otherwise enabling the transfer of the frame word to the target;

comparing a source address word from the FIFO store to allowed addresses stored in an allowed address store;

enabling the transfer of frame data from the FIFO to the target if a match is sensed, otherwise, enabling the generation of IDLE characters; encoding the generated IDLE characters and the data from the target into parallel data;

converting the parallel data into serial data; and

directing the serial data signals to a fibre channel.

7. A method for blocking an unauthorized access to limited access data stored in a fibre channel configuration network system including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and internal data storage systems, at least one internal data storage

system accessed by a target address and containing the limited access data stored therein, said method intercepting data access to the internal data storage system containing the limited access data, said method comprising the steps of:

accepting serial data from the fabric switch fibre channel;

converting the serial data to parallel data;

decoding the parallel data to parallel frames of data;

sequentially entering the parallel frames of data into words of data in a FIFO store;

detecting a start of word data in the FIFO store;

sensing an upper level device path word from the FIFO store;

comparing the destination identifying address from the fibre channel data to the internal target address;

comparing a source address word from the FIFO store to allowed addresses stored in an allowed address store if the destination identifying address matches the internal target address, otherwise enabling the transfer of the frame word to the internal target data storage system;

enabling the transfer of frame data from the FIFO to the target if a match is sensed between the source address and the target address, otherwise, enabling the transmission of IDLE signals; and

encoding the IDLE signals or the data signals from the FIFO store into parallel signals;

converting the parallel signals into serial data; and

directing the serial data signals to a fibre channel.

8. A method for blocking an unauthorized access to limited access data stored in a fibre channel configuration network system including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and

internal data storage systems, at least one internal target data storage system accessed by a target address and containing the limited access data stored therein, said method intercepting data access to the internal target data storage system containing the limited access data, said method comprising the steps of:

accepting data from the fabric switch fibre channel;

comparing a destination identifying address from the fibre channel data to the internal target address;

comparing a source address from a requesting device in the fabric switch fibre channel to allowed addresses stored in an allowed address store if the destination identifying address matches the internal target address, otherwise enabling the transfer of the source address to the internal target data storage system;

enabling the transfer of information from the requesting device to the internal target data storage system if a match is sensed between the source address and the target address otherwise, enabling the generation of IDLE characters; and

directing the IDLE characters or the data frames from the internal target data storage system to a fibre channel of the fabric switch fibre channel.

9. An article of manufacture for use in a fibre channel configuration network system including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal work stations and internal data storage systems, at least one internal data storage system accessed by a target address and containing the limited access data stored therein, said method intercepting data access to the internal data storage system containing the limited access data,

said article of manufacture comprising a computer-readable storage medium tangibly embodying a program of executable computer instructions which may cause said fibre channel configuration network to:

accept serial data from the fabric switch fibre channel;

convert the serial data to parallel data;

decode the parallel data to parallel frames of data;

sequentially enter the parallel frames of data into words of data in a FIFO store;

detect a start of frame word data in the FIFO store;

sense an upper level device path word from the FIFO store;

compare the destination identifying address from the fibre channel data to the internal target address;

compare a source address word from the FIFO store to allowed addresses stored in an allowed address store if the destination identifying address matches the internal target address, otherwise enable the transfer of the frame word to the internal target data storage system;

enable the transfer of frame data from the FIFO to the internal target data store if a match is sensed between the source address and the target address, otherwise, enable the transmission of IDLE characters;

encode the IDLE signals or the data signals from the internal target data store into parallel signals;

convert the parallel signals into serial data; and

direct the serial data to a fibre channel of the fabric switch fibre channel.

10. An article of manufacture for use in a fibre channel configuration network system including a fabric switch fibre channel interconnecting work stations and data storage devices with an internal fibre channel arbitrated loop having internal

work stations and internal data storage systems, at least one internal target data storage system accessed by a target address and containing the limited access data stored therein,

said article of manufacture comprising a computer-readable storage medium tangibly embodying a program of executable computer instructions which may cause said fibre channel configuration network to intercept data access to the internal target data storage system containing the limited access data, said article of manufacture to:

accept data from the fabric switch fibre channel;

compare a destination identifying address from the fibre channel data to the internal target address;

compare a source address from a requesting device in the fabric switch fibre channel to allowed addresses stored in an allowed address store if the destination identifying address matches the internal target address, otherwise enable the transfer of the data frame to the internal target data storage system;

enable the transfer of said data frame from the requesting device to the internal target data storage system if a match is sensed between the source address and the target address otherwise, enable the generation of IDLE signals; and

direct the IDLE signals or the data signals from the internal target data storage system to a fibre channel of the fabric switch fibre channel.